

PTO/SB/21 (09-04)

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FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/663,240
Filing Date	September 16, 2003
First Named Inventor	Bolgiano et al.
Art Unit	2661
Examiner Name	Chin, Wellington
Attorney Docket Number	I-1-0065.10US

**ENCLOSURES (Check all that apply)**

<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input checked="" type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	Form PTO-1449, Copy of Japanese Office Action and Its English Translation, and Two References Cited.
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	Remarks	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name	VOLPE AND KOENIG, P.C.		
Signature			
Printed name	C. Frederick Koenig, III		
Date	September 12, 2006	Reg. No.	29,662

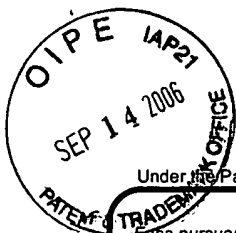
**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	C. Frederick Koenig, III	Date	September 12, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/17 (01-06)

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Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

# FEE TRANSMITTAL

## For FY 2006

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 180.00

**Complete if Known**

Application Number	10/663,240
Filing Date	September 16, 2003
First Named Inventor	Bolgiano et al.
Examiner Name	Chin, Wellington
Art Unit	2661
Attorney Docket No.	I-1-0065.10US

**METHOD OF PAYMENT (check all that apply)**☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_☒ Deposit Account Deposit Account Number: 09-0435 Deposit Account Name: InterDigital Communications Corporation

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

**FEE CALCULATION (All the fees below are due upon filing or may be subject to a surcharge.)****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES**

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims
-	=	x	=	0

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	
-	=	x	=	0

HP = highest number of independent claims paid for, if greater than 3.

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
-	-	/ 50 =	(round up to a whole number) x	=

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Information Disclosure Statement 37 CFR 1.97 Requirement 180.00

**SUBMITTED BY**

Signature		Registration No. (Attorney/Agent) 29,662	Telephone 215-568-6400
Name (Print/Type)	C. Frederick Koenig, III		Date September 12, 2006

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the **PATENT APPLICATION** of:

Bolgiano et al.

**Application No.:** 10/663,240

**Confirmation No.:** 3692

**Filed:** September 16, 2003

**For:** LOCATING A WIRELESS USER

**Group:** 2661

**Examiner:** Chin, Wellington

**Our File:** I-1-0065.10JP

**Date:** September 12,  
2006

09/15/2006 EAYALEW1 00000029 090435 10663240

01 FC:1806 180.00 DA

**INFORMATION DISCLOSURE STATEMENT  
INCLUDING RULE 1.704(d) STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed PTO-1449 form. Newly cited documents are indicated by an asterisk (\*). Copies of the cited documents are enclosed, and pursuant to 37 C.F.R. §1.98(a)(2)(ii), copies of the cited U.S. publications and/or patent documents have not been included.

Pursuant to 37 C.F.R. § 1.97(e)(1), the undersigned certifies that each new item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application, copy enclosed, and that this communication was not received by any individual designated in §1.56(c) more than three (3) months prior to the filing of this Information Disclosure Statement.

Pursuant to 37 C.F.R. § 1.704(d), the undersigned certifies that each new item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application, copy enclosed, and that this communication was not received by any individual designated in § 1.56(c) more than thirty (30) days prior to the filing of this Information Disclosure Statement.

The source of the newly identified items of information is the enclosed communication from a foreign patent office in a counterpart application, dated July 11, 2006 and received August 25, 2006.

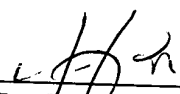
**Applicant: Bolgiano et al.**  
**Application No.: 10/663,240**

This Information Disclosure Statement is being filed with the fee required by 37 C.F.R. § 1.17(p).

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the PTO-1449 form indicating his consideration of the cited materials.

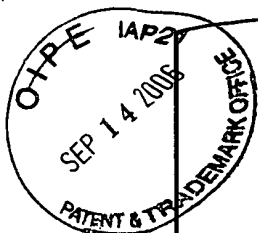
Respectfully submitted,

Bolgiano et al.

By   
C. Frederick Koenig, III  
Registration No. 29,662  
(215) 568-6400

Volpe and Koenig, P.C.  
United Plaza, Suite 1600  
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CFK/akg  
Enclosures ( 5 )



FORM PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)				ATTY. DOCKET NO. I-1-0065.10US		SERIAL NO. 10/663,240	
				APPLICANT Bolgiano et al.			
				FILING DATE September 16, 2003		GROUP 2661	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
	4,081,748	03/1978	Batz				
	4,099,121	07/1978	Fang				
	4,128,809	12/1978	Kage				
	4,426,712	01/1984	Gorski-Popiel				
	4,530,087	07/1985	Yamamoto				
	4,599,734	07/1986	Yamamoto				
	4,644,351	02/1987	Zabarshy				
	4,675,863	06/1987	Paneth et al.				
	4,780,885	10/1988	Paul et al.				
	4,799,252	01/1989	Eizenhoffer et al.				
	4,901,307	02/1990	Gilhausen et al.				
	5,043,736	08/1991	Darnell et al.				
	5,046,066	09/1991	Messenger				
	5,058,200	10/1991	Dornstetter et al.				
	5,081,643	01/1992	Schilling				
	5,097,484	03/1992	Akaiwa				
	5,101,501	03/1992	Gilhausen et al.				
	5,103,459	04/1992	Gilhausen et al.				
	5,109,390	04/1992	Gilhausen et al.				
	5,155,689	10/1992	Wortham				
	5,166,951	11/1992	Schilling				
	5,203,018	04/1993	Hilrose				
	5,208,756	05/1993	Song				
	5,218,367	06/1993	Sheffer et al.				
	5,218,618	06/1993	Sagey				
	5,193,101	09/1993	McDonald et al.				

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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				APPLICANT Bolgiano et al.			
				FILING DATE September 16, 2003		GROUP 2661	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		5,223,844	06/1993	Mansell et al.			
		5,260,943	11/1993	Comroe et al.			
		5,260,967	11/1993	Schilling			
		5,280,472	01/1994	Gilhousen et al.			
		5,289,499	02/1994	Weerackody			
		5,289,527	02/1994	Tiedemann, Jr.			
	*	5,293,645	03/1994	Sood et al.**			
		5,305,353	04/1994	Weerackody			
		5,321,696	04/1994	Buchholz et al.			
		5,323,384	06/1994	Norwood			
		5,347,535	09/1994	Karasawa et al.			
		5,365,516	11/1994	Jandrell			
		5,367,539	11/1994	Copley			
		5,371,734	12/1994	Fischer			
		5,371,780	12/1994	Amitay			
		5,430,769	07/1995	Patsiokas et al.			
		5,479,488	12/1995	Seshadri			
		5,483,244	01/1996	Grube et al.			
		5,483,668	01/1996	Malkamaki et al.			
		5,513,176	04/1996	Dean et al.			
		5,533,011	07/1996	Dean et al.			
		5,533,013	07/1996	Leppanen			
		5,584,057	12/1996	Dent			
		5,614,876	03/1997	Bolgiano et al.			
		5,625,876	04/1997	Gilhousen et al.			

\*\*corresponds to Japanese Application H05-211470

EXAMINER	DATE CONSIDERED
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				APPLICANT Bolgiano et al.				
				FILING DATE September 16, 2003		GROUP 2661		
FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
		0528090	02/1993	EP			YES	NO
		2237706	05/1991	GB				
		2259430	03/1993	GB				
		S63-065723	09/1989	JP			X	
		H02-3007	01/1990	JP			X	
		S63-286027	05/1990	JP			X	
	*	H03-177669	08/1991	JP			X	
		H06-97914	09/1991	JP			X	
	*	H01-070286	03/1993	JP			X	
		H02-302133	06/1992	JP			X	
		S53-109328	08/1978	JP			X	
		92/10890	06/1992	WO				
		93/06669	04/1993	WO				
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)								
		Edited by William C. Jakes, Jr., "Microwave Mobile Communications," Bell Telephone Laboratories, North Andover, MA, pgs. 309-323 and 535-541, 1974.						
		Kavehrad et al., "Direct-Sequence Spread Spectrum with DPSK Modulation and Diversity for Indoor Wireless Communications," IEEE, pgs. 224-236, 1987.						
		Pickholtz et al., "Field Tests Designed to Demonstrate Increased Spectral Efficiency for Personal Communications," IEEE Globcom, pgs. 878-882, 1991.						
		Schilling et al., "Spread Spectrum for Commercial Communications," IEEE Communications Magazine, Vol. 29, Issue 4, pgs. 66-79, April 1991.						
		Schilling et al., "PCN Field Test Experiments Using Broadband-CDMA," IEEE, pgs. 321-324, December 1991.						
		Kauffman et al., "Digital Spread-Spectrum Multipath-Diversity Receiver for Indoor Communications," IEEE, pgs. 1038-1041, 1992.						
		Esmailzadeh et al., "Direct Sequence Spread Spectrum Communication in Selection Diversity Channels by Time Division Duplex Technique," IEEE, pgs. 345-348, 1992.						
EXAMINER					DATE CONSIDERED			

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
		Jack H. Winters, The Diversity Gain Of Transmit Diversity In Wireless Systems With Rayleigh Fading, New Orleans, May 1, 1994, New York, IEEE, US, pgs. 1121-1125.	
		Ghassmzadeh et al., "Indoor Propagation and Fading Characterization of Spread Spectrum Signal at 2 GHz," IEEE, pgs. 56-60, 1992.	
		Erceg et al., "Urban/Suburban Out-of-Sight Propagation Modeling," IEEE Communications Magazine, pgs. 56-61, June 1992.	
		Whang et al., Performance Evaluation of a Direct-Sequence Spread-Spectrum Multiple-Access with Microscopic and Macroscopic Diversity in Mobile Radio Environment, IEEE, pgs. 803-806, 1993.	
		Seshadri et al., "Two Signaling Schemes For Improving The Error Performance Of Frequency-Division-Duplex (FDD) Transmission Systems Using Transmitter Antenna Diversity," Secaucus, NJ, New York, IEEE, US, pgs 508-511, May 18, 1993.	
		Seshadri et al., "Advanced Techniques For Modulation, Error Correction, Channel Equalization, And Diversity," AT&T Technical Journal, US, American Telephone and Telegraph Co., New York, Vol. 72, No. 4, pgs. 48-63, July 1, 1993.	
		"Ultraphone, System Description GP110," InterDigital Communications Corporation, pgs. 1-17, October 1993.	
		"Ultraphone, System Technical Specification GP130, Interdigital Communications Corporation, pgs. 1-12, January 1994.	
		Blanz et al., "Performance of a Cellular Hybrid C/TDMA Mobile Radio System Applying Detection and Coherent Receiver Antenna Diversity, IEEE, pgs. 568-579, May 1994.	
		Esmailzadeh et al., "Quasi-Synchronous Time Division Duplex CDMA", IEEE, pgs. 1637-1641, 1994.	
		Azad et al., "Multirate Spread Spectrum Direct Sequence CDMA Techniques", The Institution of Electrical Engineers, 1994, pp. 4/1-4/5.	
		"Mobile Station-Base Station Compatibility Standard for Dual-Mode Wideband Spread Spectrum Cellular System", TIA/EIA/IS-95-A, TIA Interim Standard, May 1995	
		Seshadri et al., Advances Techniques For Modulation, Error Correction, Channel Equalization, And Diversity, AT&T Technical Journal, US, American Telephone and Telegraph Co., New York, Vol. 72, No. 4, July 1, 1993, pgs. 48-63	
		Naguir et al., "Performance of CDMA Cellular Networks With Base-Station Antenna Arrays: The Downlink", IEEE Internal Conference on Communications, May 1994, Vol. 2, pgs. 795-799.	
		Gerlach et al., "Base Station Transmitter Antenna Arrays With Mobile to Base Feedback", IEEE 1993 Conference Record of the Twenty-Seventh Asilomar Conference on Signals, Systems, and Computers, November 1993, Vol. 2, pgs. 1432-1436.	
		Xiang et al., "TDM/CDMA VSAT Network Integrating Voice/Data Service And Its Operation Management," IEEE, pgs. 476-480, 1992.	

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